

How to Install and Operate

HO REMOTE CONTROL SWITCHES

No. 0922 right-hand and No. 0923 left-hand switches are made to mate with the HO track used by Lionel HO equipment. The switches are sold separately and each switch includes the following equipment.

Short section of track measuring $\frac{1}{3}$ of a regular curved 18-inch radius section
Control Box

Four-foot length of five-conductor color-coded cable

Set of molded number plates

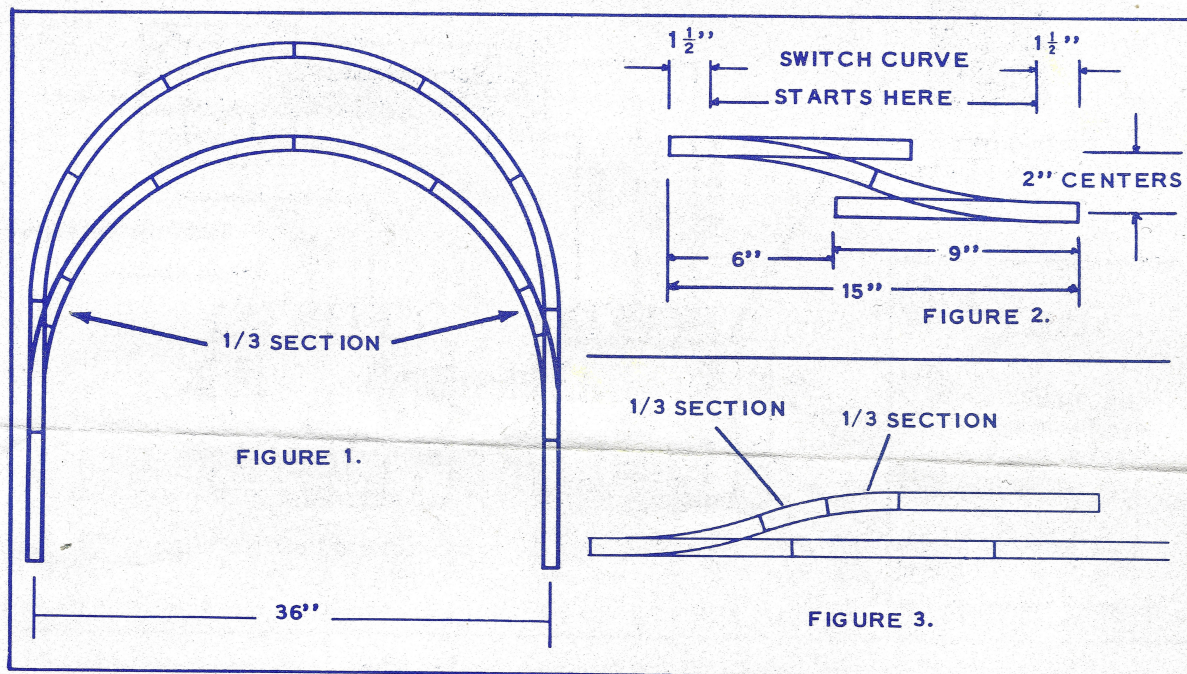
Motor extension bracket with mounting screws

Four metal rail joiners

HOW TO INSTALL REMOTE CONTROL SWITCHES

The straight portion of the switch is the same length as a regular straight section of track. The curved portion of the switch is $\frac{2}{3}$ regular curved section, so that with the addition of the extra $\frac{1}{3}$ section it equals a full curved 18" radius section.

To install the switch as a part of a regular half or quarter circle the $\frac{1}{3}$ section is added to the switch as shown in Figure 1. To make a crossover between two parallel tracks as in Figure 2 the $\frac{1}{3}$ sections can be omitted. To make a siding parallel to the main line, as in Figure 3 the $\frac{1}{3}$ section is reversed and an additional $\frac{1}{3}$ must be purchased separately.



Note that the curved portion of the switches does not start at the same point as the straight portion, but $1\frac{1}{2}$ inches away from it. For this reason some layouts require the addition of extra $1\frac{1}{2}$ inch track section, also available separately from your hobby dealer.

HOW TO USE THE MOTOR EXTENSION BRACKET

Most HO cars and locomotives will clear the switch motor housing. However, if your equipment includes extra long streamliners or coaches having a big overhang, you can extend the switch motor by 3/8" to provide more clearance.

To do this, remove the two screws holding the motor to the switch. Screw the extension bracket in the same place. Slide the spring wire of the motor into the outside hole of the throw rod and screw the motor to the extension bracket. Figure 4 illustrates the assembly.

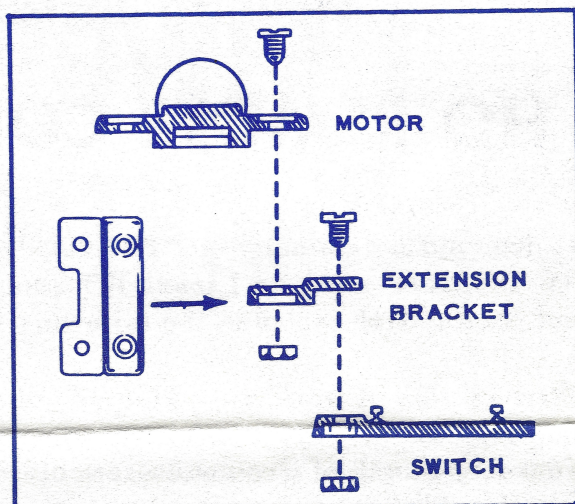


Figure 4 - How to Add Extension Bracket

ELECTRICAL CONNECTIONS

This remote control switch is made to operate on approximately 16 Volts A.C. The control box furnished with the switch is wired to the switch and to the A.C. terminals of your power pack. Check the wiring diagram in Figure 5 carefully. Incorrect wiring may burn out your switch motor.

From the five-wire cable furnished with the switch tear off the blue and yellow wires together. Connect the blue and yellow wires to the A.C. terminals of your power pack. The other ends of the wires are connected to the two screws on the side of the control box. Connect the green, black and red wires from the control box to the switch motor.

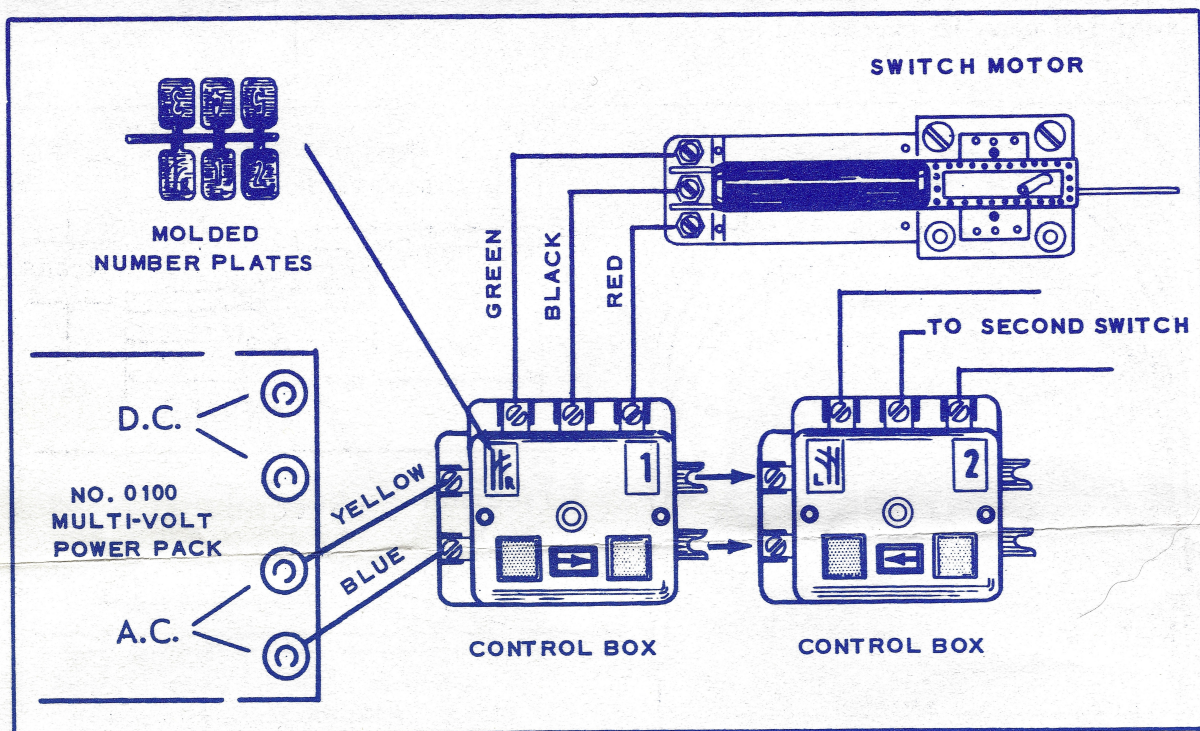


Figure 5 - Wiring Diagram for Switches

The arrow between the two push-buttons on your control box indicates which button was pushed last, and which way your train will proceed after passing through the switch. If the switch is not set in the direction indicated by the arrow, reverse green and red wires on control box.

When more than one switch is used on a layout, simply slide the control boxes together as shown by arrows between the control boxes in Figure 5 and tighten screws. These two connections act as your power terminals. A whole line of control boxes can be joined in this way making a neat panel for controlling your switches.

A set of molded numbers and a switch diagram are furnished with each switch box. These numbers and the diagram can be snipped off and cemented into panels on top of the control boxes. This identification will enable you to tell at a glance the number and type of switch each control box is operating.

WARRANTY

Your switch has been thoroughly inspected and is guaranteed to be in perfect operating condition. However, the coils are for intermittent contact only and cannot be guaranteed against burnouts due to incorrect wiring, or use of too high voltage. Never hold button of Control Box longer than one second.

If the switch motor is burned out we will repair or replace it for a 75¢ charge. Return MOTOR only. Do not return switch. The warranty and handling charge when the switch is returned with the motor is \$1.25.

When returning the motor for repair, wrap it securely to prevent damage in transit, and address it to the Lionel Factory Service Department. Any correspondence regarding items returned for service must be enclosed in a separate stamped and addressed envelope which can be fastened to the package. Postal regulations do not permit any letter or written information to be enclosed in a parcel post package.

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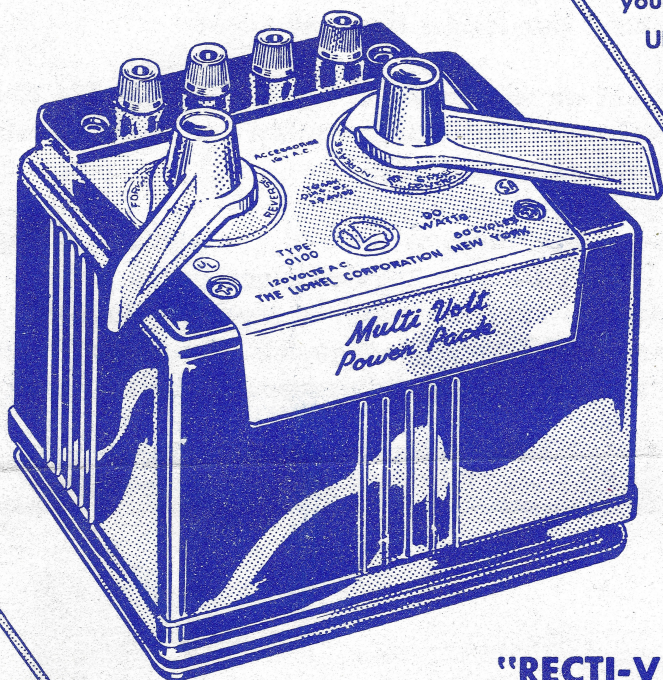
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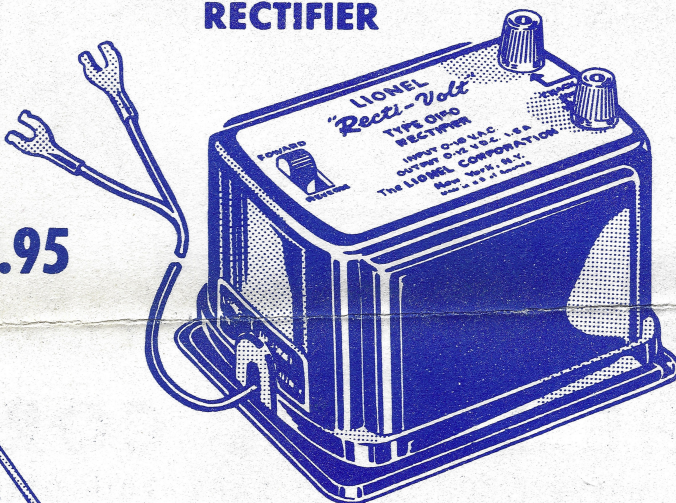
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